

## Claims:

1. A restoration method for restoring a flow of packets in a packet transfer network composed of a plurality of routers, comprising the steps of:

5 a) setting a working route and a reserved route in the packet transfer network, wherein the reserved route branches from the working route at a start-point router;

at each of routers other than the start-point router on the working route,

10 b) determining whether a failure occurs in a link to a next-hop router on the working route;

c) determining whether an incoming packet is to be protected;

15 d) when a packet to be protected is received in case of occurrence of the failure, sending the packet to be protected back to the start-point router; and

at the start-point router,

e) when receiving back the packet to be protected, forwarding it to the reserved route.

2. The restoration method according to claim 1, wherein,  
20 when the start-point router receives a packet to be protected in case of occurrence of the failure, the start-point router forwards

007227-20000000



5                    wherein each of a plurality of designated routers  
forming the working route, comprises:

a table for storing information indicating where a  
10 packet to be protected is forwarded to; and

15                    wherein the designated routers other than the  
start-point router forwards the packet to be protected back to the  
start-point router in case of occurrence of the failure, wherein  
the start-point router forwards the packet to be protected received  
back from another router to the reserved route.

7. The packet transfer network according to claim 5,

5            8.            A router in a packet protection network in which a working route and a reserved route are set by controlling designated routers which are involved in the working and reserved routes, wherein the reserved route branches from the working route at a start-point router, comprising:

15 to be protected is received in case of occurrence of the failure,  
forwarding the packet to be protected depending on the information  
stored in the table.

20 start-point router in case of occurrence of the failure, wherein  
the start-point router forwards the packet to be protected received  
back from another router to the reserved route.

9. The router according to claim 8, wherein the

5

10

15

20

d) when a packet to be protected is received in case of occurrence of the failure, sending the packet to be protected

back to the start-point router; and

at the start-point router,

e) when receiving back the packet to be protected,  
forwarding it to the reserved route.